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LAUNCHING AND ASSOCIATED SERVICES FOR INDIAN SATELLITES

Agreement Between the
UNITED STATES OF AMERICA
and INDIA

Effected by Exchange of Notes
Signed at Washington July 18, 1978

Artificial satellites tele.

NOTE BY THE DEPARTMENT OF STATE

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INDIA

Launching and Associated Services for Indian Satellites

Agreement effected by exchange of notes
Signed at Washington July 18, 1978;
Entered into force July 18, 1978.

The Acting Secretary of State to the Indian Ambassador

DEPARTMENT OF STATE
WASHINGTON

JUL 18 1978

Excellency:

I have the honor to refer to the Memorandum of Understanding between the Department of Space of the Government of India and the National Aeronautics and Space Administration (NASA) of the United States dated July 18, 1978 concerning the terms and conditions under which NASA will furnish launching and associated services to the Department of Space of the Government of India and the related obligations and responsibilities of the parties.

This Memorandum of Understanding, which is set forth as Annex to this Note, provides in part that it and any mutually agreed amendments thereto shall be subject to confirmation by the Government of the United States and the Government of India through an exchange of diplomatic notes.

In consideration of the continuing, mutually beneficial relationships between agencies of the United States Government and agencies of the Government of India in the peaceful uses of outer space, I have

His Excellency
N. A. Palkhivala,
Ambassador of India.

the honor to inform you that the Government of the United States confirms that the provisions of the Memorandum of Understanding referred to above are acceptable.

If you would also confirm that the provisions of the Memorandum of Understanding and this Note are acceptable to your Government, I have the honor to propose that this Note, and Your Excellency's reply in confirmation together with the annexed Memorandum of Understanding to that effect, shall constitute an agreement between our two Governments regarding this matter which shall enter into force on the date of your reply.

Accept, Excellency, the renewed assurances of my highest consideration.

For the Acting Secretary of State:

[1]

Enclosure:

Annex.

[1] Clyde L. McClelland.

MEMORANDUM OF UNDERSTANDING BETWEEN THE DEPARTMENT OF SPACE OF THE GOVERNMENT OF INDIA AND THE UNITED STATES NATIONAL AERONAUTICS AND SPACE ADMINISTRATION CONCERNING THE FURNISHING OF LAUNCHING AND ASSOCIATED SERVICES FOR INDIAN NATIONAL SATELLITE SYSTEM - I SPACECRAFT

The Department of Space of the Government of India (hereinafter referred to as DOS) and the National Aeronautics and Space Administration of the United States of America (hereinafter referred to as NASA) set forth in this Memorandum of Understanding their general understandings as to the terms and conditions under which NASA will furnish space vehicle launchings and associated services for the Indian National Satellite System-I (hereinafter referred to as INSAT-I) spacecraft on a reimbursable basis and the general responsibilities of the parties.

DOS and NASA intend that, at an appropriate time in the future, they will enter into a launch services agreement, expressing the specific terms and conditions under which NASA will furnish launchings and associated services for each individual INSAT-I spacecraft launching consistent with the general understandings set forth in this Memorandum of Understanding.

It is understood that NASA will provide launchings and associated services for INSAT-I spacecraft in accordance with the United States policy governing launch assistance as announced by the President of the United States of America on October 9, 1972. INSAT-I spacecraft are multi-purpose spacecraft destined for geo-stationary orbit for the purposes of providing domestic public telecommunications, direct TV broadcasting and meteorology services.

ARTICLE I
RESPONSIBILITIES

A. DOS will undertake the following responsibilities:

1. The design, fabrication and testing of its INSAT-I spacecraft.

2. Furnishing information to NASA of its requirements for INSAT-I launching, at as early a date as possible and in any event sufficiently in advance of the target date of initial launching in a series, to accommodate financial, procurement and operational requirements of both parties. Such information will include INSAT-I spacecraft description, orbital characteristics, environmental constraints, approximate launching dates and back-up launching requirements, tracking and data acquisition requirements, and such other information required by NASA for planning purposes.

3. Incorporating provisions in the INSAT-I spacecraft design, specifications and test programmes to assure and demonstrate INSAT-I spacecraft compatibility with the appropriate launching vehicle physical constraints, safety requirements and in-flight environment and with tracking and data acquisition facilities.

4. Providing flight-ready INSAT-I spacecraft at the Eastern Test Range (ETR), in accordance with the time schedules agreed upon under the launch services agreement.

5. Furnishing all ground support equipment (GSE) peculiar to INSAT-I mission and personnel required for its operation, except for those items of GSE which NASA may specifically agree to provide and/or operate.

6. Performing all necessary analyses and implementing mission operation plans required for the placement of INSAT-I spacecraft into geo-stationary orbit after separation of the spacecraft from the launch vehicle in low-earth orbit.

7. Requesting reimbursable tracking and data acquisition support by specific NASA tracking stations in connection with placement by DOS or its contractors of INSAT-I spacecraft into geo-stationary orbit. If NASA agrees to provide such support, DOS will furnish any additional or unique equipment as may be required at such stations and provide for their operation. This responsibility applies to such equipment as may be required by NASA after separation of a spacecraft from the launch vehicle in low earth orbit.

B. NASA will undertake the following responsibilities:

1. Furnishing specifications regarding appropriate launch vehicle(s) as stated in Article I, B. 3 below and current NASA tracking and data acquisition station equipment as may be necessary for DOS to carry out its responsibilities under Article I, A. 3 above.

2. Make best efforts to schedule the INSAT-I launchings within the general time period requested by DOS.

3. Provide either Space Transportation System (hereinafter referred to as STS) launches or expendable Delta 3910 launch vehicles as per Article II,C below to meet the INSAT-I mission requirements.

4. Providing necessary facilities and support, including launch crew services, for pre-launch integration of the spacecraft at the Eastern Test Range (ETR), and for DOS checkout of the spacecraft.

5. Launch INSAT-I spacecraft from the Eastern Test Range (ETR) of the United States.

6. Calculating the orbit achieved for INSAT-I spacecraft separation from the launch vehicle, based on vehicle telemetry and tracking data.

7. Providing such additional Spacecraft Tracking and Data Network (STDN) support as may be requested by DOS and agreed to by NASA.

8. Furnishing mutually agreed technical consultation and/or GSE support of specific or general DOS requirements.

ARTICLE II
REIMBURSEMENT PROVISIONS

A. Reimbursement for STS launch services will be specified in the Launch Services Agreement and will be in accordance with the terms of NASA Management Instruction (NMI) 8610.8 dated January 21, 1977.

B. Reimbursement for Delta 3910 launch services will be specified in the Launch Services Agreement and will be in accordance with the terms of NASA Policy Directive (NPD) 8610.5 dated January 12, 1973 and NASA Management Instruction (NMI) 9240.1 dated February 2, 1976.

C. It is understood that the primary launch option for the first INSAT-I spacecraft desired by DOS is for a STS launch in January 1981. The Delta 3910 launch option will remain available to DOS through the first manned orbital flight of the STS or September 30, 1979, whichever is later. If DOS chooses the Delta 3910 option at that time, all progress payments received

by NASA for the launch on STS will be credited towards the Delta 3910 launch, and DOS at the time of option will commence payments as specified in the launch services agreement. Payments in excess of costs incurred for optional services will also be refunded.

ARTICLE III
LIMITATION OF LIABILITIES

The launch services agreement to be entered into shall state the allocation of liabilities that may arise out of the launch and associated services to be provided by the United States and by its contractors and subcontractors under this Memorandum of Understanding.

ARTICLE IV
DOCUMENTATION AND REPORTS

A. NASA and DOS will exchange, through their respective Project Managers, all documents and information required for successful accomplishment of INSAT-I missions, and such documents and information will be used by NASA as provided for in the launch services agreement.

B. After each launching, DOS will provide NASA, if requested all data from the INSAT-I spacecraft relevant to ascertain the performance of the launch vehicle, and such data will be used only for the aforesaid purpose.

C. In using data passed to NASA under paragraph A. 2 of Article I and paragraphs A and B of this Article, NASA will respect and protect, consistent with applicable U. S. laws, the confidentiality of the proprietary information designated as such by DOS, as provided for in the launch services agreement.

ARTICLE V
REGISTRATION OF SPACE OBJECTS

A. The Government of India as the State of Registry shall register each INSAT-I space object separated on behalf of DOS into earth orbit from the STS or expendable launch vehicles, as the case may be and shall furnish appropriate information regarding the space object to the Secretary General of the United Nations. The Government of India shall have jurisdiction and control over INSAT-I space objects upon separation from their respective launch vehicles into earth orbit.

B. The United States will register the STS and those components of the INSAT-I spacecraft not separated from it as a single space object. The United States will also register any components of an expendable launch vehicle which go into earth orbit.

ARTICLE VI
DURATION AND AMENDMENT

A. This Memorandum of Understanding shall terminate on December 31, 1983 except with respect to launching and associated services to be provided after that date under a launch services agreement executed on or before that date.

B. This Memorandum of Understanding may be amended by mutual consent of the parties.

C. This Memorandum of Understanding may be terminated by either party upon six months written notice, except with respect to launching and associated services to be provided after that date under a launch services agreement executed on or before that date.

ARTICLE VII
ENTRY INTO FORCE

This Memorandum of Understanding, and any mutually agreed amendments thereto, will not enter into force until signed by both parties and confirmed by the Government of the United States and the Government of India through an exchange of diplomatic notes.

[1]

Secretary
to the Government of India
Department of Space

July 18, 1978.
Date

[2]

Administrator
U. S. National Aeronautics
and Space Administration

18 July 1978
Date

[1] Satish Dhawan.
[2] Robert A. Frosch.

The Indian Minister to the Secretary of State

भारतीय राजदूतावास
वाशिंगटन, डी० सी०
EMBASSY OF INDIA
WASHINGTON, D. C.

July 18, 1978

Excellency:

I have the honour to acknowledge receipt of your Excellency's Note of July 18, 1978, with attached Memorandum of Understanding, which reads as follows:

"Excellency:

I have the honor to refer to the Memorandum of Understanding between the Department of Space of the Government of India and the National Aeronautics and Space Administration (NASA) of the United States dated July 18, 1978 concerning the terms and conditions under which NASA will furnish launching and associated services to the Department of Space of the Government of India and the related obligations and responsibilities of the parties.

This Memorandum of Understanding, which is set forth as Annex to this Note, provides in part that it and any mutually agreed amendments thereto shall be subject to confirmation by the Government of the United States and the Government of India through an exchange of diplomatic notes.

In consideration of the continuing, mutually beneficial relationships between agencies of the United States Government and agencies of the Government of India in the peaceful uses of outer space, I have the honor to inform you that the Government of the United States confirms that the provisions of the Memorandum of Understanding referred to above are acceptable.

If you would also confirm that the provisions of the Memorandum of Understanding and this Note are acceptable to your Government, I have the honor to propose that this Note, and Your Excellency's reply in confirmation together with the annexed Memorandum of Understanding to that effect, shall constitute an agreement between our two Governments regarding this matter which shall enter into force on the date of your reply.

Accept, Excellency, the renewed assurances of my highest consideration.

For the Acting Secretary of State:

Sd/- Clyde L. McClelland

His Excellency
N.A. Palkhivala,
Ambassador of India.

Enclosure: Memorandum of Understanding."

I have the honour to state that the Government of India confirm the provisions of the Memorandum of Understanding

and concur in the proposals in your Excellency's Note. The Government of India therefore agrees that your Note, together with the Memorandum of Understanding and this reply, shall constitute an agreement between our two Governments, which shall enter into force on the date of this reply.

Accept, Excellency, the renewed assurances of my highest consideration.

[1]

His Excellency
Cyrus R. Vance,
Secretary of State,
Department of State,
WASHINGTON, D.C.

[1] A. B. Gokhale.

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